Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-25. (Canceled)

26. (Previously Presented) Apparatus for measuring straightness in at least one plane and at least one of pitch and yaw in the movement of a first body with respect to a second body along an axis, the apparatus comprising:

a transmitter unit mountable on the first body;

an optic unit mountable on the second body;

wherein the transmitter unit directs at least one light beam towards the optic unit;

wherein one of the transmitter unit and the optic unit is provided with at least one detector to detect two or more light beams,

wherein the displacement of the two or more light beams incident on the at least one detector enables measurement of straightness error in at least one plane and at least one of pitch and yaw during said movement of the first body relative to the second body, and

wherein the output of one detector is used in the measurement of both:

i) at least one of straightness and roll; and

ii) at least one of pitch and yaw.

27. (Previously Presented) Apparatus according to claim 26 wherein displacement of the two or more light beams incident on the at least one detector also enables measurement of roll error during said movement of the first body relative to the second body.

28. (Currently Amended) Apparatus according to claim 26 wherein a common equation ~~may be~~ is used to determine different deviations.

29. (Previously Presented) Apparatus according to claim 26 wherein three light beams are detected at said at least one detector, such that pitch, roll, yaw errors or straightness errors in two planes are determined.

30. (Currently Amended) Apparatus according to claim 26 wherein the optic unit is provided with two or more optical elements to reflect said two or more light beams towards the transmitter ~~unit~~unit.

31. (Previously Presented) Apparatus according to claim 30 wherein the two or more optical elements comprise two or more retroreflectors.

32. (Previously Presented) Apparatus according to claim 31 wherein two of the retroreflectors are positioned side-by-side in the optic unit and the third retroreflector is positioned behind one of the first and second retroreflectors.

33. (Previously Presented) Apparatus according to claim 32 wherein the third retroreflector is positioned conceptually behind one of the first and second retroreflectors.

34. (Currently Amended) Apparatus according to claim 26 wherein the at least one detector ~~comprise~~ comprises at least one pixilated image sensor.

35. (Previously Presented) Apparatus according to claim 26 wherein the two or more light beams remain substantially parallel when transmitted and/or reflected.

36. (Previously Presented) Apparatus according to claim 26 wherein the two or more light beams remain substantially collimated throughout the system.

37. (Previously Presented) Apparatus according to claim 26 wherein said at least two light beams are transmitted from at least one coherent light source and wherein the light beams are intensity modulated to reduce their coherence length.

38. (Previously Presented) Apparatus according to claim 37 wherein the light beams are intensity modulated to cause frequency variation, which reduces the coherence pattern of the detected beams.

39. (Previously Presented) Apparatus according to claim 38 wherein said at least two light beams are intensity modulated by turning the at least one light source on and off.

40. (Previously Presented) Apparatus according to claim 26 wherein a light source is provided to produce the at least one beam and wherein an optical fiber separates the light source from the start of the projected light beam.

41. (Previously Presented) Apparatus according to claim 26 wherein at least one optical element within the system is mounted on a bar to reduce movement of the optical element due to expansion.

42. (Previously Presented) Apparatus according to claim 41 wherein the bar is thermally stabilized to minimize expansion of the bar and thus minimize movement of the at least one optical element mounted on the bar.

43. (Canceled)

44. (Currently Amended) A method for measuring deviation in a movement of a first body with respect to a second body, using a transmitter unit mounted on the first body that outputs at least one incoherent light beam and an optic unit mounted on the second body, wherein one of the transmitter unit and the optic unit is provided with one or more detector to detect one or more incoherent light beam transmitted to or reflected from the optic unit, the method comprising the steps of:

determining a position of the incoherent light beam on the detector;

adjusting automatically at least one of a position of the transmitter unit and a movement vector of the second body in response to feedback from the determined position of the light beam on the detector in order to maintain the incoherent light beam on the detector during relative movement of the first and second bodies; ~~and~~

measuring the deviation in the movement of the first body with respect to the second body at least in part from the adjustment of the at least one of i) the position of the transmitter unit and ii) the movement vector of the second body; and

recording said measurement so as to provide a measure of said deviation along a movement path of the first and second bodies.

45. (Previously Presented) A method according to claim 44 wherein the transmitter unit is mounted on an adjustable base unit which is mounted on the first body and wherein the position of the transmitter unit is adjusted by adjusting the adjustable base unit.

46. (Previously Presented) A method according to claim 44 wherein the feedback is used to maintain the light beam on a predetermined part of the detector.

47. (Previously Presented) A method according to claim 44 wherein the deviation is in part measured from the adjustment of the at least one of the position of the transmitter unit and the movement vector of the second body and in part measured from the position of the light beam on the detector.

48. (Previously Presented) A method according to claim 44 wherein the deviation is measured only from the adjustment of the at least one of the position of the transmitter unit and the movement vector of the second body.

49. (New) A method for measuring deviation in a movement of a first body with respect to a second body, a transmitter being mounted on the first body and an optical unit being mounted on the second body, one of the transmitter and the optical unit including at least one detector for detecting light, the method comprising:

outputting an incoherent light beam by the transmitter;

receiving the incoherent light beam on the detector;

determining a position of the incoherent light beam on the detector;

automatically adjusting at least one of a position of the transmitter and a movement of the second body in response to the determined position of the incoherent light beam on the detector, the automatic adjustment maintaining the incoherent light beam on the detector during relative movement of the first and second bodies;

measuring a deviation corrected by the automatic adjustment; and

recording the measured deviation.